

## ABSTRACT

It is intended to provide a novel unialgal culture strain showing a high culture efficiency of a large-sized red alga which is immature, can be stored and cultured over a long period of time and has at least one of the following properties, i.e., producing a physiologically active substance at a high yield, showing a high growth speed of the alga body, and being highly capable of absorbing nutritional salts. Namely, an immature unialgal culture strain originating in a large-sized red marine alga which is characterized by showing no matured female gametophyte in nature but showing matured tetrasporophyte alone and grows in a natural marine water area containing fresh water. This unialgal culture strain is constructed by collecting the matured sporophyte, cutting the sporophyte and allowing to stand to thereby release spores, culturing the released spores and continuously proliferating and culturing even after the growth of an upright body from the germinated spore.